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SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/29/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)
Office Action Summary	10/720,506	MANU, MITICA
	Examiner	Art Unit	
	Qing Chen	2191	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _24 November 2003_.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-22_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-22_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _24 November 2003_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _20031124, 20040415_.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   This is the initial Office action based on the application filed on November 24, 2003.

2.   **Claims 1-22** are pending.

Oath/Declaration

3.   The oath or declaration is defective. A new oath or declaration in compliance with 37

CFR 1.67(a) identifying this application by application number and filing date is required. See

MPEP §§ 602.01 and 602.02.

> The oath or declaration is defective because:
> It does not properly identify the mailing address of the inventor. A mailing address is an
> address at which an inventor customarily receives his or her mail and may be either a
> home or business address. The mailing address should include the ZIP Code designation.
> The inventor's mailing address given on the oath or declaration only includes the city,
> state, and zip code. The mailing address may be provided in an application data sheet or a
> supplemental oath or declaration. See 37 CFR 1.63(c) and 37 CFR 1.76.

Drawings

4.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they

do not include the following reference sign(s) mentioned in the description:

- Reference numbers "182," "184," and "186" on page 6.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office

action to avoid abandonment of the application.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they

include the following reference character(s) not mentioned in the description:

- Reference number "318" in Figure 3.

- Reference number "420" in Figure 4.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because:

- Reference character "312" has been used to designate both comment and class entity in Figure 3.

- Reference character "414" has been used to designate both class graphical entity and "include System" entity in Figure 4.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application.

The drawings are objected to because:

- The word "Computer" is missing the letter "e" in Element 202 in Figure 2.

- The reference line for reference number "306a" should be drawn to the variable "receiver" in Element 306 in Figure 3.

- The reference line for reference number "308a" should be drawn to the variable "receiver" in Element 308 in Figure 3.

- The variable "receiver" in Elements 306a and 406a should be changed to "generator" as indicated in the specification *(see page 10, paragraph [0042])*.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application.

Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the Examiner, the Applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5.   The disclosure is objected to because of the following informalities:

- The specification contains the following typographical errors:

  o   The term "FIG" should be pluralized on page 2, paragraph [0012].

  o   The programming language "Self" is repeated twice on page 8, paragraph [0027]. The repeated recitation should be deleted.

o   The programming language "VB Script" should be deleted on page 8, paragraph

[0027], since "VB Script" is the equivalent of "VBScript" and "VBScript" is the art-

accepted abbreviation for Visual Basic Scripting Edition.

o   The variable "receiver" in the term "receiver = 0" should be changed to

"generator" on page 10, paragraph [0041]. See recitation of the term on page 10,

paragraph [0042] and the objection to the drawings above regarding Elements 306a

and 406a.

o   The period (.) after the term "FIG. 6c" should be deleted on page 11, paragraph

[0045].

o   The sentence "Namespace Demo 316 may be modeled as illustrated in FIG. 4

416" should presumably read "Namespace Demo 316 may be modeled as 416 as

illustrated in FIG. 4" on page 11, paragraph [0047].

Appropriate correction is required.

6.   The use of trademarks, such as DELPHI, JAVA, and JAVASCRIPT, has been noted in

this application. Trademarks should be capitalized wherever they appear (capitalize each letter

OR accompany each trademark with an appropriate designation symbol, *e.g.*, ™ or ®) and be

accompanied by the generic terminology (use trademarks as adjectives modifying a descriptive

noun, *e.g.*, "the JAVA programming language").

Although the use of trademarks is permissible in patent applications, the proprietary

nature of the marks should be respected and every effort made to prevent their use in any

manner, which might adversely affect their validity as trademarks.

Claim Objections

7.   **Claims 6-8, 12, 13, 15-17, 19, 20, and 22** are objected to because of the following informalities:

- **Claim 6** contains a typographical error: the word "least" is misspelled.

- **Claims 6 and 7** contain a typographical error: the word "languages" should be changed to singular form.

- **Claims 8 and 22** contain a typographical error: the word "and" should be added after the second-to-last limitation.

- **Claims 12, 13, 15, 17, and 19** contain a typographical error: the article "a" in the phrase "wherein a one of the plurality of code elements ..." should be deleted, since the article is redundant and, therefore, unnecessary.

- **Claims 16 and 20** contain a typographical error: a comma (,) before the word "or" should be added to separate the last two elements in the series. Although the use of a comma before "or" in a series is not mandatory, Applicant is advised to make the correction in order to keep the grammatical style consistent throughout the claims.

- **Claim 20** contains a typographical error: a comma (,) should be added after the limitation "a class entity."

Appropriate correction is required.

Claim Rejections - 35 USC § 112

8.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9.   **Claims 7 and 9** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 contains the trademark or trade name VISUAL BASIC. When a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of the 35 U.S.C. 112, second paragraph. *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, the use of a trademark or trade name in a claim to identify or describe a material or product (in the present case, a specific scripting language) would not only render a claim indefinite, but would also constitute an improper use of the trademark or trade name.

Claim 9 recites the limitation "a user interface." However, it is noted that a user interface is a component of a system, whereas a method only pertains to steps or acts that begin with an active verb. In the interest of compact prosecution, the Examiner subsequently does not give any patentable weight to this limitation for the purpose of further examination.

Claim Rejections - 35 USC § 101

10.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

11.   **Claims 1-7 and 22** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-7 are directed to systems. However, the recited components of the systems appear to lack the necessary physical components (hardware) to constitute a machine or manufacture under § 101. Therefore, these claim limitations can be reasonably interpreted as computer program modules—software *per se*. Furthermore, the specification discloses that the various techniques may be implemented in connection with software *(see page 11, paragraph [0048])*. Therefore, the claims are directed to systems of functional descriptive material *per se*, and hence non-statutory.

The claims constitute computer programs representing computer listings *per se*. Such descriptions or expressions of the programs are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer, which permit the computer program's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element, which defines structural and functional

interrelationships between the computer program and the rest of the computer, that permits the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claim 22 recites computer-readable medium as a claimed element. However, it is noted that the specification describes such computer readable media comprising computer storage media and communication media. The specification further added that "communication media typically embodies computer readable instructions, data structures, program modules or other data in a modulated data signal such as a carrier wave or other transport mechanism and includes any information delivery media. The term 'modulated data signal' means a signal that has one or more of its characteristics set or changed in such a manner as to encode information in the signal. By way of example, and not limitation, communication media includes wired media such as a wired network or direct-wired connection, and wireless media such as acoustic, RF, infrared, and other wireless media" *(see page 4, paragraph [0017])*. Consequently, the computer-readable medium can be reasonably interpreted as carrying electrical signals. Furthermore, the claim recites that the computer-readable medium includes (emphasis added) computer-readable instructions. This can also be reasonably interpreted as the computer-readable medium carrying electrical signals, since the computer-readable instructions are not tangibly embodied (stored) on the computer-readable medium.

Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism *per se*, and as such are nonstatutory natural phenomena. *O'Reilly v. Morse*, 56 U.S. (15 How.) 62, 112-14

(1853). Moreover, it does not appear that a claim reciting a signal encoded with functional

descriptive material falls within any of the categories of patentable subject matter set forth in §

101.

Claim Rejections - 35 USC § 102

12.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13.   **Claims 1-5, 8-13, and 15-22** are rejected under 35 U.S.C. 102(b) as being anticipated by

Goodwin et al. **(US 6,199,195).**

        As per **Claim 1**, Goodwin et al. disclose:

-   a modeler for defining at least one of a plurality of code elements and a structure of a

code block and generating a graphical representation of the at least one code element and

structure of the code block *(see Figure 3: 302, 304, and 306; Column 8: 44-54, "Shown are a*

number of modeling tools 302, 304, 306 both data modeling 302 and object modeling 304, 306,

defining data within a database 308 or defining objects and relating these objects to the data

within the database 308. These definitions are referred to herein as logical models. "; Column

12: 65-67 through Column 13: 1, "Meta data objects can also be modeled into case tools, such

as RATIONAL ROSE. One benefit of using a case tool is the ability to graphically associate meta

data objects. ").

As per **Claim 2**, the rejection of Claim 1 is incorporated; and <u>Goodwin et al.</u> further

disclose:

- a user interface for receiving the definition of the at least one code element and the

structure of the code block *(see Figure 1: 108 and 110; Column 5: 47-49, "... a user interface*

108, 110, such as a keyboard 108 and screen 110 on which a graphical user interface (GUI) is

implemented. ").

As per **Claim 3**, the rejection of **Claim 1** is incorporated; and <u>Goodwin et al.</u> further

disclose:

- a selector for selecting at least one of a plurality of programming languages in which

to generate the source code from the functional model *(see Figure 5: 508; Column 13: 42-44,*

"... the user options for code to be generated are obtained ... ").

As per **Claim 4**, the rejection of **Claim 3** is incorporated; and <u>Goodwin et al.</u> further

disclose:

- a code generator for receiving the graphical representation of the at least one code

element and the structure of the code block and the at least one programming language and

generating source code in the at least one programming language *(see Figure 3: 330; Column*

13: 20-26, "... the code generator 330 is a model driven application that reads the object

elements from the schema server 316 and applies a set of known templates 324, 326, 328 for a

set of services 320 for a given framework 318 to the object elements of the unified models to

produce a set of source code objects 332, 334.").

As per **Claim 5**, the rejection of **Claim 2** is incorporated; and <u>Goodwin et al.</u> further disclose:

- wherein the at least one programming language comprises C++ *(see Column 13: 52-55, "Thus, the code generator 330 can support the creation of, for example, IDL, JAVA or C++ files ...").*

As per **Claim 8**, <u>Goodwin et al.</u> disclose:

- defining a plurality of code elements within a block of programming code *(see Column 8: 44-54, "Shown are a number of modeling tools 302, 304, 306 both data modeling 302 and object modeling 304, 306, defining data within a database 308 or defining objects and relating these objects to the data within the database 308.");*

- specifying a structure of the block of programming code including the plurality of code elements *(see Column 8: 44-54, "These definitions are referred to herein as logical models.");* and

- generating from the plurality of code elements and the structure of the block of programming code including the plurality of code elements a graphical representation of the code elements and flow of the block of programming code *(see Column 12: 65-67 through Column 13: 1, "Meta data objects can also be modeled into case tools, such as RATIONAL*

ROSE. One benefit of using a case tool is the ability to graphically associate meta data

objects.").

As per **Claim 9**, the rejection of **Claim 8** is incorporated; and <u>Goodwin et al.</u> further

disclose:

- a user interface for receiving the definition of the plurality of code elements with the

block of programming code and for specifying the structure of the block of programming code

(see Column 8: 53-62, "A repository adaptor tool 312 takes the logical models generated by the

modeling tools 302, 304, 306 (logical models 202 (FIG. 2)) and the model adaptors 310 as

inputs and generates the unified models 206 (FIG. 2) in the unified modeling language. The

unified models 206 (FIG. 2) are stored in a schema repository 314 accessed by a schema server

316. The unified models 206 (FIG. 2) from the repository adaptor tool 312 are received by the

schema server 316 and stored within the schema repository 314.").

As per **Claim 10**, the rejection of **Claim 8** is incorporated; and <u>Goodwin et al.</u> further

disclose:

- specifying at least one target language in which source code for the graphical

representation is to be generated *(see Figure 5: 508; Column 13: 42-44, "... the user options for*

code to be generated are obtained ...").

As per **Claim 11**, the rejection of **Claim 10** is incorporated; and <u>Goodwin et al.</u> further

disclose:

- generating the source code in the at least one target language *(see Figure 3: 330;*

Column 13: 20-26, "... the code generator 330 is a model driven application that reads the

object elements from the schema server 316 and applies a set of known templates 324, 326, 328

for a set of services 320 for a given framework 318 to the object elements of the unified models

to produce a set of source code objects 332, 334. ").

As per **Claim 12**, the rejection of **Claim 8** is incorporated; and <u>Goodwin et al.</u> further

disclose:

- wherein one of the plurality of code elements comprises a variable, comment,

constant, object, function, method, prototype, member, data type, callback, delegate, reference,

field, variant, property, interface, class, type, enumeration, structure, primitive, array, or event

handle *(see Column 8: 44-48, "... defining objects and relating these objects to the data within*

the database 308. ").

As per **Claim 13**, the rejection of **Claim 8** is incorporated; and <u>Goodwin et al.</u> further

disclose:

- wherein one of the plurality of code elements comprises a code relation *(see Column*

4: 31-36, "A 'relationship' defines a link between two object classes. ").

As per **Claim 15**, the rejection of **Claim 8** is incorporated; and <u>Goodwin et al.</u> further

disclose:

- wherein one of the plurality of code elements comprises an evaluation entity *(see Column 4: 6-8, "An 'object instance' is an embodiment (instantiation) of an object class.")*.

As per **Claim 16**, the rejection of **Claim 15** is incorporated; and Goodwin et al. further disclose:

- wherein the evaluation entity comprises one of a method call, a plurality of code entities, a plurality of code relations, or an instantiation of a class *(see Column 4: 6-8, "An 'object instance' is an embodiment (instantiation) of an object class.")*.

As per **Claim 17**, the rejection of **Claim 8** is incorporated; and Goodwin et al. further disclose:

- wherein one of the plurality of code elements comprises a passive entity *(see Column 8: 49-53, "Also shown are a plurality of model adapters 310 for defining a translation of the logical models of the modeling tools 302, 304, 406 into unified models, expressed in a unified modeling language, such as Unified Modeling Language (UML).")*.

As per **Claim 18**, the rejection of **Claim 15** is incorporated; and Goodwin et al. further disclose:

- wherein the passive entity comprises a comment or a modeling diagram *(see Column 8: 49-53, "Also shown are a plurality of model adapters 310 for defining a translation of the logical models of the modeling tools 302, 304, 406 into unified models, expressed in a unified modeling language, such as Unified Modeling Language (UML).")*.

As per **Claim 19**, the rejection of **Claim 8** is incorporated; and <u>Goodwin et al.</u> further disclose:

- wherein one of the plurality of code elements comprises a block entity *(see Column 4: 1-3, "An 'object class' is a set of data (attributes) and functional capabilities (routines) encapsulated into a single logical entity.")*.

As per **Claim 20**, the rejection of **Claim 19** is incorporated; and <u>Goodwin et al.</u> further disclose:

- wherein the block entity comprises a method entity, a member entity, a class entity, a namespace entity, or a file entity *(see Column 4: 1-3, "An 'object class' is a set of data (attributes) and functional capabilities (routines) encapsulated into a single logical entity.")*.

As per **Claim 21**, the rejection of **Claim 20** is incorporated; and <u>Goodwin et al.</u> further disclose:

- wherein a many-to-many relationship exists between block entities *(see Column 4: 31-36, "A 'relationship' defines a link between two object classes." and "Relationships can be one-to-one, one-to-many, or many-to-many.")*.

Claim 22 is a computer-readable medium claim corresponding to the method claim above (Claim 8) and, therefore, is rejected for the same reason set forth in the rejection of Claim 8.

Claim Rejections - 35 USC § 103

14.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15.   **Claims 6 and 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Goodwin et al.** **(US 6,199,195)**.

As per **Claim 6**, the rejection of **Claim 2** is incorporated; however, Goodwin et al. do not

disclose:

-     wherein the at least one programming language comprises C#.

Official Notice is taken that it is old and well known within the computing art to include

C# as one of the programming languages. C# is an object-oriented programming language that is

used widely for developing software components suitable for deployment in distributed

environments. Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to include wherein the at least one programming language

comprises C#. The modification would be obvious because one of ordinary skill in the art would

be motivated to provide support for the most commonly used programming languages.

As per **Claim 7**, the rejection of **Claim 2** is incorporated; however, <u>Goodwin et al.</u> do not

disclose:

- wherein the at least one programming language comprises Visual Basic®.

Official Notice is taken that it is old and well known within the computing art to include

Visual Basic® as one of the programming languages. Visual Basic® (VB) has been used

extensively by software programmers to develop a wide variety of applications. Therefore, it

would have been obvious to one of ordinary skill in the art at the time the invention was made to

include wherein the at least one programming language comprises Visual Basic®. The

modification would be obvious because one of ordinary skill in the art would be motivated to

provide support for the most commonly used programming languages.

16.   **Claim 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Goodwin et al.**
(US 6,199,195) in view of **Bailey et al.** **(US 6,684,385)**.

As per **Claim 14**, the rejection of **Claim 13** is incorporated; however, <u>Goodwin et al.</u> do

not disclose:

- wherein the code relation comprises a mathematical operator.

<u>Bailey et al.</u> disclose:

- wherein the code relation comprises a mathematical operator *(see Column 8: 30-36,*

"... each program object typically performs some useful function, such as a Boolean operation

(e.g., AND, OR, etc.), a mathematical operation, a data acquisition operation ..., renders some

comparison (e.g., less than, greater than, equal to, etc.), and so on.").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Bailey et al. into the teaching of Goodwin et al. to include wherein the code relation comprises a mathematical operator. The modification would be obvious because one of ordinary skill in the art would be motivated to model all aspects of a software program.

Conclusion

17.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A. **Marmelstein** (US 5,187,788) discloses a graphics system and method for generation of code in the Ada language.

B. **McInerney et al.** (US 5,325,533) disclose human oriented object programming system (HOOPS), which provides an interactive and dynamic environment for computer program building.

C. **Berry et al.** (US 5,537,630) disclose an improved method and system for visual programming within a data processing system.

D. **Fish et al.** (US 5,875,333) disclose generating source code for relating a dialog interface with a business object in a computing application.

E. **Keller et al.** (US 6,212,672) disclose a software development tool utilizing an intermediate object modeling language.

F. **Bowman et al.** **(US 6,233,726)** disclose a visual development environment, which

provides drag-and-drop code editing methodology, using Reference Card and Parameter Wizard

methodologies.

G. **Burke et al.** **(US 6,789,252)** disclose a method and apparatus for creating and

applying dynamically defined business objects used in such computer systems, for using such

business objects to configure business software applications, and for facilitating the automated

sharing of business information across a business enterprise or with other business enterprises or

customers.

H. **Alloing et al.** **(US 7,032,210)** disclose generation of program source code of a

computer application, from an information model representing a high level specification of the

computer application.

I. **Little et al.** **(US 7,047,518)** disclose a system for integrated computer software

application development and modeling.

J. **Phan** **(US 2003/0115571)** discloses use of multiple programming languages in a

single model representation of the software application.

K. **Schloegel et al.** **(US 2004/0044990)** disclose a framework for generating code for the

model-based development of a system.

L. **Chan** **(US 2004/0111702)** discloses a method and apparatus for visual programming.

M. **Wain et al.** **(US 2005/0015745)** disclose methods and systems that enable a user to

build user-interfaces and applications based on a policies and metadata.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Qing Chen whose telephone number is 571-270-1071. The Examiner can normally be reached on Monday through Thursday from 7:30 AM to 4:00 PM. The Examiner can also be reached on alternate Fridays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Wei Zhen, can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WEI ZHEN
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